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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,529	12/13/2000	Gerald W. Mills	723.040US1	8869

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EXAMINER

TUGBANG, ANTHONY D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/736,529

Applicant(s)

MILLS, GERALD W.

Examiner

A. Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/1/06
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 11-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9,10,34-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 1, 2006 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election/Restrictions***

3. Claims 11 through 26 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 7, 2003.
4. Claims 1 through 8 and 27 through 32 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 26, 2004.
5. Applicant's election of Group II, Claim 33, in the reply filed on June 1, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

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6. Claim 33 now stands as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 1, 2006.

Claims 9, 10 and 34 through 38 are pending for examination below.

***Claim Rejections - 35 USC § 103***

7. Claims 9 and 36 through 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lademann et al 3,769,698 or Bull 3,466,580 in view of Lawrence 3,243,752.

Lademann and Bull each show a method of forming a microcoil that includes attaching a trace of conductive material to an initially planar, or flat, film of insulating material, attaching an end of the planar film to a mandrel prior to any rolling of the mandrel or the film, and rolling the film itself and the trace of conductive material together to circumferentially wrap around a longitudinal axis of rolling.

Regarding Claim(s) 36, both Lademann and Bull show mandrels that are round in cross section.

Regarding Claim(s) 38, the mandrels of Lademann or Bull each comprise a “semi-rigid coaxial line”, which can be read as any line drawn along the flexible material of the substantially planar film.

Lademann and Bull, however, do not mention as to whether the mandrel itself is rolling to pull the film of insulating material around in a circumferential manner.

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Lawrence shows that a mandrel can be rolling or rotating itself to pull a film of insulating material with attached traces of conductive material around to form a circumferential wrapped coil around a longitudinal axis of rolling.

Regarding Claim(s) 37, Lawrence further teaches that the mandrel (tube 20) receives an inner member (mandrel 21, see col. 3, lines 50-55). Therefore, the claimed mandrel can be said to be "hollow".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the methods of either Lademann or Bull by actually rolling each of their mandrels such that each would pull and end of the film, as taught by Lawrence, to achieve art recognized equivalent circumferential wrapped coils that are formed around a longitudinal axis of rolling.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have rotated, or rolled, the mandrels of Lademann or Bull, as taught by Lawrence, to provide an alternative means of forming circumferential wrapped coils.

8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art above, as applied to claim 9, and further in view of Weatherly 4,639,708.

Lademann and Bull, as modified by Lawrence, disclose the claimed manufacturing method as relied upon above in Claim 9. The modified Lademann and Bull method do not mention that the conductive material includes copper.

Weatherly teaches that conductive trace material made from copper is conventional and well known in the art of manufacturing microcoils (see col. 2, lines 1-19).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Lademann and Bull by utilizing the copper conductive trace material, as taught by Weatherly, to positively provide an alternative material for electrical conductivity of the traces.

9. Claim 35 rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art above as applied to claim 9 above, and further in view of Okamura 5,639,566.

Lademann and Bull, as modified by Lawrence, disclose the claimed manufacturing method as relied upon above in Claim 9. The modified Lademann and Bull method do not mention that the flexible insulating material includes polyimide.

Okamura teaches that polyimide is a material that provides electrical insulating characteristics in high output applications for conductive trace materials (see col. 1, lines 30-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the flexible insulating material of Lademann and Bull by utilizing polyimide, as taught by Okamura, to positively provide electrical insulating characteristics in high output applications for the conductive trace materials.

### ***Response to Arguments***

10. Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection set forth above.

With respect to the Claim 10 and the limitations of "electrically isolated", the applicant(s) urge that this limitation means that the "solderable attaching trace" must be completely isolated and electrically isolated from the "trace of conducting material". The examiner notes Wohlhieter

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does not meet this limitation because certain portions of Wohlhieter's "solderable attaching trace" (e.g. 14) are directly connected to the "trace of conducting material" (e.g. winding 12), see col. 2, lines 43-46. Therefore, Wohlhieter does not teach "affixing a solderable attaching trace to the film, wherein the solderable attaching trace is *electrically isolated* from the trace of conductive material" (lines 3-4 of Claim 10, emphasis added), and thus would not be obvious to combine with any of the prior art.

#### ***Allowable Subject Matter***

11. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

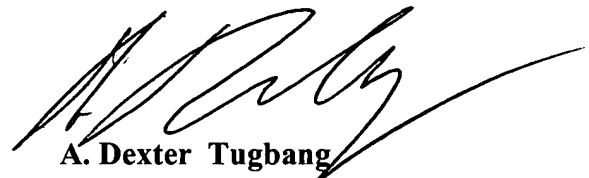
#### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

July 20, 2006